

**WHAT IS CLAIMED IS:**

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1. A method for web-based control of a legacy telephone system, comprising:

- enabling a legacy call server to communicate with a web application;
- using the web application to control the legacy call server;
- enabling a legacy telephony device to communicate with the web application;

and

- using the web application to control the legacy telephony device.

2. The method of claim 1, wherein the step of enabling the legacy call server to communicate with the web application includes:

- providing a communication channel between the legacy call server and the web application; and
- translating data transferred between the legacy call server and the web application.

3. The method of claim 2, wherein the step of providing a communication channel includes:

- using a user proxy server to control access to the legacy call server.

4. The method of claim 1, wherein the step of using the web application to control the legacy call server includes:

- sending a call control command to the legacy call server.

4 5. The method of claim 1, wherein the step of using the web application to control the legacy call server includes:

sending a service control command to the legacy call server.

6. The method of claim 1, wherein the step of enabling a legacy telephony device to communicate with the web application includes:

providing a communication channel between the legacy telephony and the web application; and

translating data transferred between the legacy telephony and the web application.

7. The method of claim 6, wherein the step of translating data transferred between the legacy telephony and the web application comprises:

converting web application data to a legacy telephony device data format; and

converting legacy telephony device data to a web API data format.

8. The method of claim 1, further comprising:

using a telephony device abstraction.

9. The method of claim 8, wherein the step of using a telephony device abstraction includes:

using an abstraction for a class of telephony devices.

10. The method of claim 1, further comprising:  
routing data transferred between the legacy telephony device and the web  
application; and  
arbitrating access to the legacy telephony device.

11. The method of claim 1, further comprising:  
providing a service plugin.

12. The method of claim 11, further comprising:  
providing an execution environment for the service plugin.

13. The method of claim 1, further comprising:  
mapping the data to a legacy telephony device resource.

14. The method of claim 1, wherein the web application is an interface to a  
telephony device.

Sub A4 15. An apparatus for web-based control of a legacy telephone system,  
comprising:  
means for enabling a legacy call server to communicate with a web application;  
means for using the web application to control the legacy call server;  
means for enabling a legacy telephony device to communicate with the web  
application; and

means for using the web application to control the legacy telephony device.

16. The apparatus of claim 15, wherein means for enabling the legacy call server to communicate with the web application includes:

means for providing a communication channel between the legacy call server and the web application; and

means for translating data transferred between the legacy call server and the web application.

17. The apparatus of claim 16, wherein the means for providing a communication channel includes:

means for using a user proxy server to control access to the legacy call server.

18. The apparatus of claim 15, wherein the means for using the web application to control the legacy call server includes:

means for sending a call control command to the legacy call server.

19. The apparatus of claim 15, wherein the means for using the web application to control the legacy call server includes:

means for sending a service control command to the legacy call server.

20. The apparatus of claim 15, wherein the means for enabling a legacy telephony device to communicate with the web application includes:

means for providing a communication channel between the legacy telephony and the web application; and

means for translating data transferred between the legacy telephony and the web application.

21. The apparatus of claim 20, wherein the means for translating data transferred between the legacy telephony and the web application comprises:

means for converting web application data to a legacy telephony device data format; and

means for converting legacy telephony device data to a web API data format.

22. The apparatus of claim 15, further comprising:

means for using a telephony device abstraction.

23. The apparatus of claim 22, wherein the means for using a telephony device abstraction includes:

means for using an abstraction for a class of telephony devices.

24. The apparatus of claim 15, further comprising:

means for routing data transferred between the legacy telephony device and the web application; and

means for arbitrating access to the legacy telephony device.

25. The apparatus of claim 15, further comprising:  
means for providing a service plugin.

26. The apparatus of claim 25, further comprising:  
means for providing an execution environment for the service plugin.

27. The apparatus of claim 15, further comprising:  
means for mapping the data to a legacy telephony device resource.

28. The apparatus of claim 15, wherein the web application is an interface to  
a telephony device.

29. A computer program product comprising:  
a computer usable medium having computer readable code embodied therein for  
web-based control of a legacy telephone system, including:  
computer readable code for causing a computer to enable a legacy call server to  
communicate with a web application;  
computer readable code for causing a computer to use the web application to  
control the legacy call server;  
computer readable code for causing a computer to enable a legacy telephony  
device to communicate with the web application; and  
computer readable code for causing a computer to use the web application to  
control the legacy telephony device.

30. The computer program product of claim 29, wherein the computer readable code for enabling the legacy call server to communicate with the web application includes:

computer readable code for providing a communication channel between the legacy call server and the web application; and

computer readable code for translating data transferred between the legacy call server and the web application.

31. The computer program product of claim 30, wherein the computer readable code for providing a communication channel includes:

computer readable code for using a user proxy server to control access to the legacy call server.

32. The computer program product of claim 29, wherein the computer readable code for using the web application to control the legacy call server includes:

computer readable code for sending a call control command to the legacy call server.

33. The computer program product of claim 29, wherein the computer readable code for using the web application to control the legacy call server includes:

computer readable code for sending a service control command to the legacy call server.

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34. The computer program product of claim 29, wherein the computer readable code for enabling a legacy telephony device to communicate with the web application includes:

computer readable code for providing a communication channel between the legacy telephony and the web application; and

translating data transferred between the legacy telephony and the web application.

35. The computer program product of claim 34, wherein the computer readable code for translating data transferred between the legacy telephony and the web application comprises:

computer readable code for converting web application data to a legacy telephony device data format; and

computer readable code for converting legacy telephony device data to a web API data format.

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36. The computer program product of claim 29, further comprising:  
computer readable code for using a telephony device abstraction.

37. The computer program product of claim 36, wherein the computer readable code for using a telephony device abstraction includes:

computer readable code for using an abstraction for a class of telephony devices.



38. The computer program product of claim 29, further comprising:  
computer readable code for routing data transferred between the legacy  
telephony device and the web application; and  
computer readable code for arbitrating access to the legacy telephony device.

39. The computer program product of claim 29, further comprising:  
computer readable code for providing a service plugin.

40. The computer program product of claim 39, further comprising:  
computer readable code for providing an execution environment for the service  
plugin.

41. The computer program product of claim 29, further comprising:  
computer readable code for mapping the data to a legacy telephony device  
resource.

42. The computer program product of claim 29, wherein the web application is  
an interface to a telephony device.

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A8 } 43. An apparatus for web-based control of a legacy telephone system,  
comprising:  
a digital computer containing a communications circuit for enabling a legacy call  
server to communicate with a web application;

a circuit for using the web application to control the legacy call server;  
a circuit for enabling a legacy telephony device to communicate with the web application; and  
a circuit for using the web application to control the legacy telephony device.

44. The apparatus of claim 43, wherein the circuit for enabling the legacy call server to communicate with the web application includes:

a circuit for providing a communication channel between the legacy call server and the web application; and

a circuit for translating data transferred between the legacy call server and the web application.

45. The apparatus of claim 44, wherein the circuit for providing a communication channel includes:

a circuit for using a user proxy server to control access to the legacy call server.

46. The apparatus of claim 43, wherein the circuit for using the web application to control the legacy call server includes:

a circuit for sending a call control command to the legacy call server.

47. The apparatus of claim 43, wherein the circuit for using the web application to control the legacy call server includes:

a circuit for sending a service control command to the legacy call server.

48. The apparatus of claim 43, wherein the circuit for enabling a legacy telephony device to communicate with the web application includes:

a circuit for providing a communication channel between the legacy telephony and the web application; and

a circuit for translating data transferred between the legacy telephony and the web application.

49. The apparatus of claim 48, wherein the circuit for translating data transferred between the legacy telephony and the web application comprises:

a circuit for converting web application data to a legacy telephony device data format; and

a circuit for converting legacy telephony device data to a web API data format.

50. The apparatus of claim 43, further comprising:

a circuit for using a telephony device abstraction.

51. The apparatus of claim 50, wherein the circuit for using a telephony device abstraction includes:

a circuit for using an abstraction for a class of telephony devices.

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52. The apparatus of claim 43, further comprising:  
a circuit for routing data transferred between the legacy telephony device and the web application; and  
a circuit for arbitrating access to the legacy telephony device.

53. The apparatus of claim 43, further comprising:  
a circuit for providing a service plugin.

54. The apparatus of claim 53, further comprising:  
a circuit for providing an execution environment for the service plugin.

55. The apparatus of claim 43, further comprising:  
a circuit for mapping the data to a legacy telephony device resource.

56. The apparatus of claim 43, wherein the web application is an interface to  
a telephony device.

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A10 > 57. A system for enabling a web application to control a legacy telephone  
system comprising:  
a web application for independently controlling a legacy call server and a legacy  
telephony device;  
a call server wrapper for enabling the web application to communicate with the  
legacy call server; and

a telephony device wrapper for enabling the web application to communicate with the legacy telephony device.

58. The system of claim 57, wherein the call server wrapper comprises:  
a communication channel between the web application and the legacy call server; and  
a translator for data transferred between the web application and the legacy call server.

59. The system of claim 57, wherein the telephony device wrapper comprises:  
a communication channel between the web application and the legacy telephony device; and  
a translator for data transferred between the web application and the legacy telephony device.

60. The system of claim 59, wherein the telephony device wrapper further comprises:  
a telephony device abstraction.

61. The system of claim 57, wherein the telephony device wrapper further comprises:  
a mapping device for data communicated to the legacy telephony device.

62. The system of claim 57, wherein the telephony device wrapper comprises:  
an arbitrator for regulating access to the legacy telephony device, and  
a router for data transferred between the telephony device and the web  
application.

63. The system of claim 57, wherein the web application independently  
controls a call control function of the legacy call server.

64. The system of claim 57, wherein the web application independently  
controls a service control function of the legacy call server.

65. The system of claim 57, wherein the web application independently  
controls a user interface resource of the legacy telephony device.

66. The system of claim 57, further comprising a user proxy for screening  
access to the call server wrapper.

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